BIRDS AND DAMS IN CHINA

Using birds to understand restored ecosystems in the Lower Jinsha Valley Sichuan, China.

Dr Wendy Wright Senior Lecturer in Ecology, Monash University, Gippsland and Dr Steb Fisher, Photographer.

Wendy's involvement in this project began when Monash University set aside money to develop relationships with Chinese academics. She was invited to China to work, initially on the Tibetan Plateau. She has since moved to an ecological study of the Jinsha Valley. In carrying out this study she brings her big picture expertise to bear in an attempt to understand this area at the landscape level. Steb Fisher is the project photographer.

The Jinsha Valley is in an earthquake zone and has been highly modified by human activity, notably farming, over many millennia. It is a steep, deforested, severely eroded landscape and subject to mud floods. On farmland, attempts have made been to stabilise the soil by growing mulberry trees in the terrace walls. The mulberry leaves are a cash crop. They are sold as feed for the silkworms in the silk industry. Other attempts at soil conservation, but not necessarily beneficial for biodiversity, involve the extensive use of exotic species such as Blue gums and Leucaena (a South American "acacia-like" species).

Earmarked for inundation with the construction of four large dams on the Jinshajiang to generate hydroelectricity, the valleys in the area will be flooded to a level of 825m above sea level.

The size of this hydropower project is astonishing. The dam walls are planned to be up to 280m high. The headwaters of one reservoir will lap against the dam wall of the next, with a combined length of about the distance from Melbourne to Sydney. Their total generating capacity will be 42 GW, about the same as Australia's current capacity.

This will necessitate the relocation of farmers to the upper marginal slopes and will consequently further increase the pressure on the already limited available bird habitat. This underpins the importance of this study.

Bird studies are typically used to monitor an ecosystem's health as they:

- are relatively easy to detect, identify and survey
- live in a wide range of habitats
- are at or near the top of the food chain
- respond to environmental change at detectable spatial and temporal scales

The aim of the study is to:

- identify the birds of the area
- find the best habitat for birds
- find how to improve revegetated areas for biodiversity and ecosystem services

The birds were surveyed at 15 sites comprising:

- five mixed forest sites
- five revegetated sites (Leucaena plantations)
- five farmland sites

The difficulty here is that the bird fauna is undocumented and there is little or no local ornithological expertise available.

To overcome this bird searches were conducted along transects and the birds were photographed for later identification. Camouflaged sound recorders were placed at each site and left for four days before recording commenced. These are expensive items, worth about a month's wages for local people in the Jinsha Valley, and they needed to be camouflaged to protect them from theft. They were installed with the assistance of students from Sichuan University. The sound recorders were set to record bird song for five minutes, three times per day; at dawn, one hour after dawn, and again at dusk. A bird expert was engaged to identify the birdcalls. A separate part of the project involved showing pictures from a field guide of birds to local people in order to test whether farming communities hold knowledge of the local avifauna.

The results of the visual and sound data have so far identified 145 species of birds.

Birds were found to be most common in moist gullies with mixed forest and also productive farmland with diverse crops. The Leucaena plantations supported only a few species of birds but they did include the listed Lady Amherst's Pheasant.

Birds are important as they provide control of agricultural pests for farmers and their use as bio-indicators for the health of the vegetation communities. It is important to conserve gully vegetation as a protection against erosion and to increase the structural diversity in Leucaena by co-planting with other species. Engaging local communities in ecosystem protection directly affects their livelihoods. Not only do birds help control agricultural pests but there is the potential for ecotourism bringing additional wealth to the area.

At the conclusion of Wendy's talk Steb Fisher then treated us to an excellent slide show of the birds that they had found and identified in the course of this study. This was a completely new suite of birds for us and it entranced all the birdos in the audience. The pictures included a sequence of an Indian Roller courtship ritual, another of a Blue-tailed Bee-eater taking a dragonfly in mid flight and an example of the Yunnan Parrotbill, currently classified as a subspecies of Brown-winged Parrotbill. Wendy and Steb and their team have submitted a paper arguing that the Yunnan Parrotbill may be better considered a full species. Genetic studies will probably be required to support this claim. We hope to make some of Steb's photos available on the LVFNC website in the near future.

Ken Savage

BOTANY EXCURSION TO KURTH KILN REGIONAL PARK

Our August wintery excursion was really enjoyable despite the cold day. It's a long drive to Kurth Kiln, north of Gembrook – over an hour from Yarragon, so quite a hike for those members from further down the Valley.

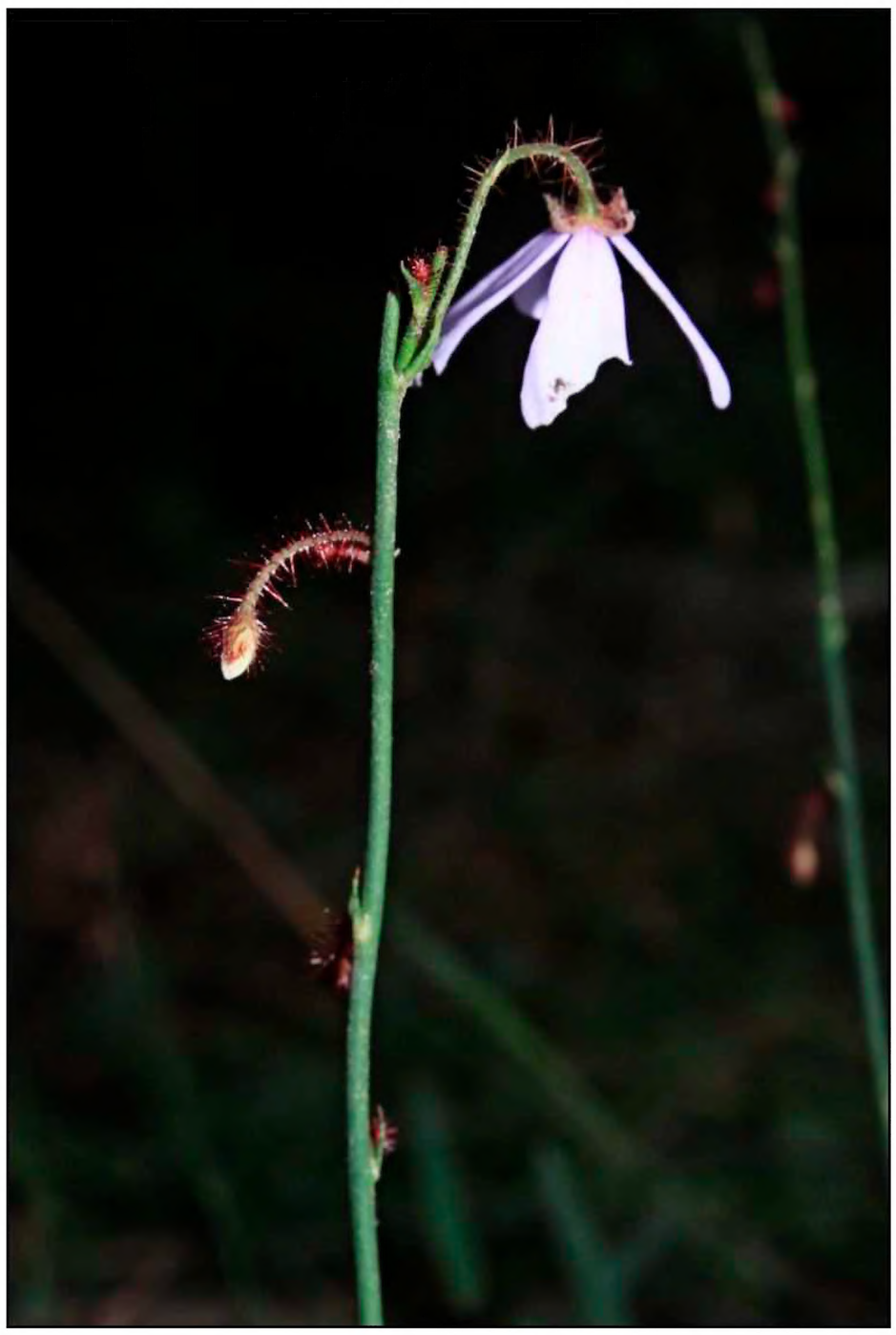
Kurth Kiln is an old charcoal burning kiln which was set up during WWII. The charcoal was used for powering cars to save petrol. It was named after Professor Kurth who designed gas producers for motor cars and patented a design for an improved charcoal kiln that could work continuously. The kiln is still there and an active Friends group have helped Parks Victoria restore it, added a water wheel and developed picnic areas and interpretation boards. My parents were members of the group right into their nineties and thoroughly enjoyed the monthly meetings and activities.

It also has a camping area and large dam and is very popular with outdoor groups. There were probably 100 people there at different times during the day, but once we started walking along the tracks we had them all to ourselves.

To quote the Parks Vic notes "The park has several plant communities ranging from Mountain Ash forest and riparian forest to shrubby foothill forest and swamp heathland." Before lunch we walked the Tomahawk Creek Track, a two kilometre loop. The overstorey comprised mainly Narrow-leaf Peppermint, Messmate, Blackwoods and Silver Wattle. We were a bit early for most flowers but Spike Wattle *Acacia oxycedrus* and Wiry Bauera *Bauera ruboides* were very common and in full flower. Not flowering, but plentiful were Trailing Goodenia *Goodenia lanata* and both Golden and Rough Bush-peas *Pultenaea gunnii and P.scabra.* We saw both *Acrotriche serrulata and A. prostrata,* Honeypots and Trailing Groundberry and two Hoveas *Hovea linearis and H. pannosa*. The *Correa reflexa* had lovely long green flowers. Our most interesting find was the rare relative of Pink-bells, *Tetratheca stenocarpa,* Long Pink-bells. It had long leafless flowering stalks and the flower stalks were covered in gland-tipped hairs. Later we saw Pink-bells *T.ciliata* and it was easy to see the difference as its flowering stems were much shorter and covered in whorls of leaves. There are two other rare plants listed in the park notes - Tall Astelia and Brickmakers Saw-sedge, but presumably they don't grow along the tracks.

There were extensive patches of Coral-ferns, both Pouched and Scrambling *Gleichenia dicarpa and G. microphylla.* Ken Harris

observed that the Scrambling were growing along the creeks whereas the Pouched were up on the slopes. We found four Blechnums or Water-ferns. Fishbone and Soft were growing in the creek and Gristle and Hard were further away. King Fern *Todea barbara* was growing in the creek and we passed through a large patch of False Bracken *Calochlaena dubia.*



The rare *Tetratheca stenocarpa* showing the leafless flowering spikes and the gland tipped hairs on the stalklets.

There was a great diversity of plants along this track, and the whole Park was remarkably weed free.

After lunch we walked along the Thornton Track, which headed north from the picnic area. It was created by the Friends of Kurth Kiln to commemorate Ron Thornton, the longtime honorary caretaker of the kiln who had lived for 18 years out there in a Forestry hut. After a short distance we entered a tall forest of Manna Gums and Mountain Ash with stands of Hazel Pomaderris and Tree Ferns. This was a really pretty walk, although there wasn't the diversity of plants here. The small flowering wattle on this track was Prickly Moses *Acacia verticillata.* Here we saw our only orchid for the day, a little Maroon-hood nestled in the base of a tree trunk.

Ursula and Alf Klink, members of the Friends group and friends of my parents had invited us up to their house for afternoon tea, so when we reached the end of this track Ursula took us up the paddock to their house. They have 18 acres in the Beenak Forest and their house is built partly underground and is off-grid, powered by solar and wind. It was a lovely end to the day, to sit in a warm house with good company.

Wendy Savage

VALE BON AND OLLIE

The loss of Bon and Ollie Thomson in quick succession recently has been not only a personal shock but a great loss of companionship, LVFNC historical connections and a repository of knowledge which is difficult to replace.

In Bon's case, I was astonished when I first joined the Field Nats 16 years ago that someone whose background was as a librarian would act the same as professional botanists (ecologists and taxonomists only – the algologists, plant physiologists, palaeobotanists etc, rarely could identify plants particularly if no flowers were available). Bon would stand and look at some scrappy piece of plant, turn it over to examine all aspects of the scrap and produce an answer in seconds. The list of submissions she made to various bodies (usually wanting to destroy some piece of bushland) is amazing.

Ollie could stand 30 metres from a eucalypt look for a couple of seconds and identify it. Then I would go up to the tree and look for buds, bark, flowers and leaves and struggle to identify it in Costermans and confirm that would be my guess. Both would work as a team and Bon would ask 'What do you think of this, Dad?' (I loved the way she called him 'Dad'.) His photographs were a joy. Some time ago Ollie made me a trap to catch

antechinuses, a beautiful piece of engineering (see below).

But I miss the friendship, the willingness to share information, the good humour and the joie de vivre of Bon and Ollie the most.

Jackie Tims

ANTECHINUS INVASION

When Geoff and I returned from a five week holiday in mid June we found a huge mess of antechinus droppings throughout our house. We have shared our house with these engaging little animals before and some years ago Ollie Thomson had made me a beautiful little trap on a similar principle to the much larger fox traps. Bait is put in the back of the trap and when pulled of a trigger the trap slams shut behind them. However I never had any success in catching them. The smell and number of droppings and the clean up process changed my mind so we tried again.

Antechinus are small carnivorous marsupials in between a mouse and small rat size. Their food is listed as 'beetles, including weevils, spiders, cockroaches and insect larvae' and when we had renovations underway with plaster removed from a wall we found a pile of huntsman spider legs on one of the noggins. However they have also eaten carrot cake, Arnotts Shortbread Cream Biscuits (Geoff trapped one in an open packet on the kitchen bench), bread (chewed through the plastic wrap), dog food (dried and canned) from the dog's bowl, and noodles from a chicken noodle soup pack. They are very cute with quite sharp pointed noses with whiskers close to the tip. They have black, shoe-button like, bulging eyes and if you confront them they will stand and front you as long as they know they have an escape path. I once managed to catch one on my stairs. Yes, they bite. Peter Menkhorst's book, 'Mammals of Victoria' says the Brown Antechinus (*Antechinus stuartii*) lives in wet forest and climbs trees so I think this is our species. Our invaders come out after dark, climb our brick chimney which is in the middle of the house and have been seen running upside down along our exposed wooden beams. Once one fell off a beam onto the concrete floor. We gasped. But it quickly got up and ran off.

Having been told by DSE that traps should be baited with the standard peanut butter, honey and oats mixed in equal parts, I tried this recipe in Ollie's trap to no avail some years ago. I tried again with similar results. Except that parts of the trap disappeared from the room in which it was set and were found 3 metres away in the laundry. Geoff baited with some mouldy cheese found in the fridge after our holiday. By the 26th July meeting of our Club we had caught 19 antechinus. We released them at the bottom of our drive near the creek more than 400 metres from the house. I asked animal ecologist Tamara Leitch if I had actually caught 19 antechinus or 1 antechinus 19 times. She laughed and said it was more likely to be closer to the latter. The 'Mammals of Victoria' book says they have been reported travelling 500 metres. Today (15 August), we caught number 29. We released the last 10 captives along our road so they would be at least 800 metres away. The numbers are decreasing but are they still finding their way home?

Postscript

Since writing the above we caught and released another five animals. For the last two weeks we have caught none, but yesterday I found a few fresh droppings and heard scratching noises during the night. I am not sorry – I miss them. Possums are a different matter. For the second year running, they have denuded a 30 year old Magnolia of buds and blossoms despite my efforts with netting. I wonder if they like cheese!!

Jackie Tims

PLEASE NOTE

EDITOR HAS NEW EMAIL ADDRESS

gill134@dcsi.net.au

REPORT ON BUSINESS MEETING HELD 19.8.2013

General Meetings & Excursions

Friday 27 September: Marine Life off the East Gippsland Coast – Don Love

Saturday 28 September: Mullundung. Meet **9.30am** Gormandale Hall, or carpool (if needed) at Traralgon Mexican Restaurant **9am SHARP**.

Friday 25 October: Heart Morass – Matt Bowler

Saturday 26 October: Excursion to Heart Morass. Meet 9.30 at Lake Guthridge, Sale or carpool **9am SHARP** at Traralgon Mexican Restaurant.

Botany Group: Saturday 5 October Nangara Reserve (10 mins from Neerim Sth). Meet there 10am, or carpool from Yarragon Railway Station 9.15. For details contact: Wendy Savage ☎ 5634 2246.

Bird Group: Tuesday **15** October (NOTE DATE) – Neerim South. Meet by **9am EDST** at corner McDougals Rd & Patrol Rd, Neerim South. VicRoads map 97 B2. For full details contact Alix Williams ☎ 5127 3393, alixw@spin.net.au

Finance – Balances: Cash Mgt Trading A/c $2327.12. Term Deposit $13,682.02.

Business Arising, Correspondence & General Business

Motion-sensitive camera – Morwell NP Friends buying on, and suggest we see how they use theirs and consider if we need one at a later date. David Stickney suggests botany group could use a microscope with camera attached which would allow digital images to be shown on screen. He will investigate options and prices.

Changes to Incorporation and rules for club – will have a special GM at August meeting where this motion will be passed. Sec will then send this to PRO.

Future SEANA camp - Sale FNC have agreed to jointly host a camp in Spring 2016. Phil will arrange meeting to discuss the proposal. Phil, Ken Harris, David Stickney and Wendy will go.

Bird identification guide for Latrobe Valley – waiting for reply from Kevin Roberts.

Storage at Uniting Church – Alix requires measurements of all equipment so we can decide what size cupboard is needed.

Traralgon South Flora Reserve – Proposal to name it "Bon & Ollie Thompson Reserve". Alix will look at DEPI website to start process.

Spring Camp 13-16 September – so far 17 participants. Rohan Bugg not able to come due to illness, but he is arranging for friends from Geelong FNC to take us out each day.

ANN member clubs list – an electronic copy is available.

Crinigan Rd Reserve Public Open Day Sunday 22 September 12-4pm. Request for members to act as group leaders to walk around with small groups and tell them about the plants/birds. Ken Harris and Wendy will help.

September BM at 3pm, then revert to 7.30pm from October.

Thankyou to Alix for Assistant Secretary work over last 2 months.

Program planning meeting – Wednesday September 18 at Lorna's. Meet 6pm for tea, then meeting at 7.30. Ask members for ideas.

Madge Vinnell has passed away. Funeral yet to be announced.

Conservation Matters

Yinnar south Flora & Fauna Reserve – Latrobe City are considering asking DEPI to burn this when they burn DEPI's section. We are invited to comment. Jackie will prepare a response.

Edward Hunter reserve development proposal – contact from Bruce King asking club for supporting letter, as we sent when development was previously proposed in 2009/10. Wendy will send a supporting letter.

GUEST SPEAKER FOR OCTOBER

Matt Bowler has worked with the WGCMA for about 7 years, formerly as River and Wetlands Officer and now in a broader role

managing their Project Delivery Team. He has managed the Heart Morass Restoration Project for 6 years. Heart Morass wetland complex covers approximately 1800Ha and has a history of change by drainage, grazing, salinisation and acidification. A community project has developed to support the purchase of over 1000 Ha of the wetland area and undertake one of the largest ecological restoration projects in Australia on private land. The multiple floods and wet conditions experienced throughout 2011 and 2012 have been a great boon to these efforts, and the diversity and abundance of flora and fauna species has increased dramatically.

FOR THE DIARY

SEANA Spring Camp at Numurkah, hosted by the Broken Creek FNC Inc.

"Riverine Flood Plains, Red Gum Forests, the Mighty Murray River"

Friday 11-Monday 14 October, based in Numurkah, in the Goulburn Valley.

Contact: Club Secretary Catherine Rourke ☎ 03 5862 3789 or: clrourke@gmail.com

NATIVE FLOWER SHOW

Australian Plants Society - South Gippsland Group

19-20 October 10am – 4pm

Leongatha Recreation Reserve Exhibition Shed

Plant and book sales

Adult Entry $3

Enquiries ☎ 5664 2221

BIRD CHALLENGE COUNT DAY

On **Saturday, November 30** LV Field Naturalists' Club members, their relatives, friends and anybody with an interest in birds is invited to take part in the Australia–wide, Bird Challenge Count Day.

The LVFNC have been participating in the Count since 1998 covering the area from Yarragon to Traralgon, Tyers to the Morwell National Park. Participants form groups with an experienced "bird" person as leader. They visit a series of sites to observe and count birds. Everyone can assist by spotting and counting birds and some people by also identifying them. It provides a great opportunity for people to learn about the local birds.

Data on the types and numbers of birds recorded are sent to Birdlife Australia. This information provides ideas about bird populations and movement in the area.

If you are interested in joining in the fun please make my life easier by **volunteering and letting me know early** (before the end of October). Thanks. Contact Alix on ☎ 5127 3393 or alixw@spin.net.au.

BIRD GROUP OCTOBER MEETING

Please note this has been moved from the usual first Tuesday (1st) to **Tuesday 15th**.

Meet by 9am EDST at corner of McDougals Rd and Patrol Rd, Neerim South.

VicRoads Map 97 B2.

For full details contact Alix ☎ 5127 3393 or alixw@spin.net.au

DON'T FORGET

DAYLIGHT SAVING STARTS 2AM SUNDAY OCTOBER 6

From Gippsland High Country Tours Newsletter No 39, Winter 2013

Threatened Species News and Updates

The Victorian Brush-tailed Rock Wallaby Recovery Team are at last having success with the last remaining wild population in Victoria. The Snowy River National Park colony is growing steadily and spreading out in their gorge habitat with youngsters appearing regularly.

A great Newsletter 'The Shadow' is published once per year. Contact DEPI Bairnsdale office ☎ 5152 0600